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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/374,740	08/13/1999	PAUL AUSTIN	5150-32801	4091

7590 12/31/2003

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EXAMINER

EDELMAN, BRADLEY E

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 12/31/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

PRE

Office Action Summary

Application No.

09/374,740

Applicant(s)

AUSTIN ET AL.

Examiner

Bradley Edelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 and 36-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 and 36-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the RCE filed on October 31, 2003. Claims 1-34 and 36-57 are presented for further examination.

Specification

The disclosure is objected to because of the following informalities:.

- a. The status of any patent applications mentioned throughout the specification must be updated (see pp. 8, 14, 17, and 32).
- b. The disclosure contains embedded hyperlinks and/or other form of browser-executable code (see p. 21). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code, or amend it as appropriate. See MPEP § 608.01.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-34, and 36-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viswanathan et al. (U.S. Patent No. 6,047,332, hereinafter "Viswanathan"), in view of Pallmann (U.S. Patent No. 6,094,684).

In considering claims 1, 16, 31, 43, and 48, Viswanathan discloses a computer-implemented method, system, and memory medium for enabling access to one or more hardware device data sources or targets (106, 112, 114, 116, 118, etc.) in a computer system (col. 8, lines 61-65), comprising:

means for automatically determining one or more data sources or targets connected to the computer (col. 8, line 60 – col. 9, line 2, wherein computer 202 uses global file system 206 to determine which sources or targets are connected to the computer);

means for automatically generating one or more logical names for each of the data sources or targets (col. 10, lines 1-3; col. 11, lines 37-38; col. 15, lines 10-22);

wherein each of the logical names is usable for configuring the respective source or target (i.e. the act of assigning the names configures the devices; see also, col. 11, lines 56-61).

However, the system taught by Viswanathan does not use the term “URL” (i.e. uniform resource locator) in describing the logical names. Applicant has argued that according to Applicant’s specification, the term “URL” in the claims is limited to the URLs that are accessible on the Web – see Applicant’s response filed on July 30, 2002, p. 6, lines 7-9. Thus, Examiner now interprets the term “URL” to mean an Internet URL. Viswanathan uses the term “identifier” and “globally unique logical name” for the devices (see Abstract; see col. 11, lines 30-38), and further describes the structure of such logical names as including a string, “/devices/hostid/...” (col. 14, lines 13-14, 50-60), but does not describe them as constituting Internet URLs.

Nonetheless, network access systems that use globally unique names to provide access to network devices, wherein the globally unique names are Internet URLs are well known, as evidenced by Pallmann. In a similar art, Pallmann discloses a data access system for accessing remote network devices that are addressed via globally unique names, wherein the unique names are Internet URLs (col. 8, lines 30-68, wherein HTTP over TCP/IP uses Internet URLs). Thus, given the teaching of Pallmann, a person having ordinary skill in the art would have readily recognized the desirability and advantages of replacing the globally unique logical names taught by Viswanathan with globally unique Internet URLs, so that users can access the devices taught by Viswanathan from anywhere in the world (see Pallmann, col. 9, lines 8-10, "enabl[ing] users to obtain data from and deliver to computers in locations across the Earth through the Internet"). Thus, it would have been obvious for the globally unique logical names taught by Viswanathan to comprise Internet URLs, as taught by Pallmann.

In considering claims 2, 17, 32, and 49, Viswanathan further discloses that the data sources and targets include addressable data sources and targets of a hardware device physically coupled to the computer system (col. 8, lines 61-65).

In considering claims 3 and 19, Viswanathan further discloses including configuration information in the logical names, wherein the configuration information is operable to be used for configuring the respective data source or target (col. 11, lines

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57-59, wherein the configuration information is used to create the logical name, and the logical name necessarily configures the source or target).

In considering claim 4, Viswanathan further discloses querying a database (DCS database) to obtain information regarding a data source or data target, and generating logical names based on the obtained information (col. 12, lines 36-41).

In considering claim 5, Viswanathan further discloses that the hardware devices are connected to the computer (col. 8, lines 61-65), wherein the automatically generating comprises:

querying a database to obtain device information regarding one or more of the hardware devices, wherein the querying includes determining the addressable data sources and targets of the device(s) (col. 12, lines 36-41; col. 11, lines 30-36); and

generating one or more logical names based on the device information and the addressable data sources and targets thus obtained (col. 11, lines 37-38).

In considering claim 6, Viswanathan further discloses the device information including device configuration information, wherein the generating comprises including device configuration information in one or more logical names identifying hardware device data sources or targets (col. 11, lines 57-59).

In considering claims 7, 18, 47, and 50, although the system taught by Viswanathan and Pallmann discloses substantial features of the claimed invention, it fails to disclose that the hardware devices may include one of DAQ, GPIB, VXI, PXI, and serial devices. Nonetheless, applicant's admission of the prior art discloses that inputting and outputting information to these devices is well known (see specification, p. 2, line 29 – p. 3, line 1). Viswanathan further discloses the use of printer devices, communication devices, storage devices, and other types of devices (see Fig. 5). Thus, it would have been obvious to a person having ordinary skill in the art to include any devices in the URL creation system taught by Viswanathan and Pallmann, so that all new devices connected to the computer can be accessed from a remote location.

In considering claim 8, although the teaching of Viswanathan and Pallmann discloses substantial features of the claimed invention, it fails to disclose the use of two separate databases, one for querying information regarding a first device, and another for querying information regarding a second device. Nonetheless, the use of two separate databases instead of one single database is merely a matter of preference. It would have been obvious to a person having ordinary skill in the art to use two separate databases instead of one large central database, because employing two smaller databases could significantly reduce the amount of time necessary to retrieve data from the databases, thereby creating a faster, and more efficient system.

In considering claim 9, Viswanathan further discloses connecting a new device to the computer (col. 10, lines 4-5), wherein said querying comprises obtaining device information regarding the new device, wherein the querying includes determining the addressable data sources and targets of the new device, and wherein the logical names include one or more logical names for one or more addressable data sources and targets of the new device (col. 9, line 66 – col. 10, line 12).

In considering claim 10, both Viswanathan and Pallmann further teach that the global unique logical names are operable to be included in an application program for reading data from or writing data to a data target (Viswanathan, col. 11, lines 37-38, 46-48, wherein using a “globally unique logical name,” “an application on any node can employ the file system to view and access all of the devices on the cluster;” Pallmann, col. 8, lines 30-49, wherein a user enters an HTTP command (which inherently consists of entry of a URL into a browser or other application) to access the remote data source or target).

In considering claims 11, 29, 33, and 56 both Viswanathan and Pallmann further teach providing one or more of the logical names/URLs to an application program, wherein the application program is operable to access the data source or data target identified by the logical name/URL (Viswanathan, col. 11, lines 37-38, 46-48; Pallmann, col. 8, lines 30-49).

In considering claims 12, 30, 34, and 57, Pallmann further discloses a data socket client, wherein the data socket client uses the URL to connect to the data source or target identified by the URL and read data from it or write data to it (col. 8, lines 30-49, wherein a data socket is inherent in using a browser to access a target or source via entry of http commands).

In considering claim 13, both Viswanathan and Pallmann further disclose integrating the logical names/URLs within the computer operating system, wherein the logical names/URLs are accessible via a user interface (inherent in both systems since the logical names/URLs are accessible via a viewable interface and the computers inherently run on an operating system).

In considering claim 14, both Viswanathan and Pallmann further disclose that the logical names/URLs are operable to be provided to application programs via said user interface (i.e. the users may access a target or source by entering the name/URL into an application, Viswanathan, col. 11, lines 37-38, 46-48; Pallmann, col. 8, lines 30-49).

In considering claim 15, both Viswanathan and Pallmann further disclose editing the logical names/URLs using said user interface (a user can enter the name/URL to access a device and thus can edit the existing name/URL in the interface).

In considering claims 20 and 51, Viswanathan further discloses one or more plug-in modules (link generator) comprised in the memory of the computer system, wherein the plug-in modules interface with the logical name generation manager, wherein each plug-in module is capable of automatically generating logical names to reference a particular type or class or data source or target (col. 10, lines 9-12).

In considering claim 21, Viswanathan further discloses one or more hardware devices connected to the computer system (col. 8, lines 61-65), wherein one or more of the plug-in modules is capable of automatically generating logical names to reference data sources or targets of a particular type or class of hardware device (col. 10, lines 9-12).

In considering claim 22, Viswanathan further discloses one or more databases which each store information regarding a particular type or class of data source or target (col. 12, lines 36-41; col. 16, lines 4-5, "class-based naming system"), wherein the information includes information regarding the locations or addresses of one or more data sources or targets connected to the computer (col. 12, lines 36-50; col. 11, lines 30-35).

In considering claim 23, Viswanathan further discloses that database information includes configuration information for one or more data sources or targets connected to the computer (col. 11, lines 56-61).

Claim 24 contains no further limitations over claims 21 and 22 combined, and is thus rejected for the same reasons stated with regard to claims 21 and 22.

Claim 25 contains the same limitations as claim 23, and is thus rejected for the same reasons stated with regard to claim 23.

Claim 26 contains the same limitations as claims 20 and 22 combined, and is thus rejected for the same reasons stated with regard to claims 20 and 22. Claim 26 additionally states that the plug-in module obtains information from the database to obtain class or type information. Viswanathan further discloses this on col. 7, lines 40-50 ("the DDI generates the globally unique identifier, the logical name, and the physical name for each logical device based on the assistance of the DCS, which, using the DCS database, generates the global minor numbers for each of the devices on behalf of the DDI").

Claim 27 contains the same limitations as claims 20, 21, and 22 combined, and is thus rejected for the same reasons stated with regard to claims 20, 21, and 22. Claim 27 additionally states that the plug-in module obtains information from the database to obtain class or type information. Viswanathan further discloses this on col. 7, lines 40-50 ("the DDI generates the globally unique identifier, the logical name, and the physical name for each logical device based on the assistance of the DCS, which, using the

DCS database, generates the global minor numbers for each of the devices on behalf of the DDI").

In considering claim 28, both Viswanathan and Pallmann further disclose editing the logical names/URLs using an executable program (a user can enter the URL to access a device and thus can edit the existing URL in the interface). Viswanathan further discloses that the logical name includes configuration information (col. 11, lines 57-59, wherein the configuration information is used to create the logical name).

In considering claims 36 and 45, Viswanathan further discloses that a device type of the target or source is automatically determined, and that the logical name is automatically formed based on a device type (col. 4, lines 54-60, wherein the link generator generates a logical name based on the device characteristics).

In considering claim 37, Viswanathan further discloses determining a first device type of a first data source of the one or more data sources or targets, and automatically determining a first template for the first data source based on the first device type, and automatically generating a first logical name based on the first template (col. 15, line 40 – col. 16, line 12).

In considering claim 38, Viswanathan discloses automatically determining a device type of the first data source (col. 10, lines 10-12), automatically determining a

first template for the first data source based on the device type (col. 10, lines 17-20, “DSOs”), and automatically determining a first plug-in module (“link generator”) for the first data source based on the first device type (col. 10, lines 10-12), wherein the first plug-in module automatically generates a first logical name from the first data source based on the template (col. 10, lines 12-16).

In considering claim 39, claim 39 contains the same limitations as claims 31 and 36, and adds that the sources and targets are hardware devices. Viswanathan further discloses that the sources and targets are hardware devices, and is thus rejected for the same reasons as stated previously.

In considering claims 40 and 46, Viswanathan further discloses that the sources and targets include hardware devices physically coupled to the computer, automatically identifying the hardware devices, querying a database to discover information about the hardware devices (i.e. physical name), and automatically generating a logical name for each of the hardware devices based on the obtained information (col. 10, lines 1-15).

In considering claim 44, Viswanathan further discloses determining a first hardware device having a plurality of channels, and automatically generating logical names for the each of the plurality of data channels (col. 14, lines 30-67, wherein different “slices” of the SCSI disk are given different logical names).

In considering claim 41, as discussed with respect to claim 44, Viswanathan further discloses determining a first hardware device having a plurality of channels, and automatically generating logical names for the each of the plurality of data channels (col. 14, lines 30-67, wherein different "slices" of the SCSI disk are given different logical names). However, Viswanathan does not disclose that the physical devices are data acquisition devices. Nonetheless, applicant's admission of the prior art discloses that inputting and outputting information to a data acquisition device is well known (see specification, p. 2, line 29 – p. 3, line 1). Viswanathan further discloses the use of printer devices, communication devices, storage devices, and other types of devices (see Fig. 5). Thus, it would have been obvious to a person having ordinary skill in the art to include any devices in the URL creation system taught by Viswanathan and Pallmann, so that all new devices connected to the computer can be accessed from a remote location.

In considering claim 42, Viswanathan further discloses that the obtained information specifies characteristics (i.e. physical name, address, etc.) of the channel of the physical device (col. 14, lines 12-35), wherein automatically generating comprises including information regarding the characteristics in the logical name for each channel (col. 14, lines 36-67, wherein "the logical names map to device physical names").

In considering claim 52, Viswanathan further discloses one or more databases which each store information regarding a particular type or class of data source or

target, wherein said information includes information regarding the locations of one or more data sources or targets connected to the computer (i.e. physical names, describing type and location of the hardware; col. 10, lines 1-14).

In considering claim 53, Viswanathan further discloses that the database information includes configuration information for one or more data sources or targets connected to the computer (col. 10, lines 43-46).

In considering claim 54, claim 54 contains substantially the same limitations as claims 51 and 52, and is thus rejected for the same reasons stated previously.

In considering claim 55, claim 55 contains substantially the same limitations as claims 49, 51, and 52, and is thus rejected for the same reasons stated previously.

Response to Arguments

In response to Applicant's request for reconsideration filed on October 31, 2003, Applicant reiterated the arguments made in the request for reconsideration filed on August 11, 2003. Applicant primarily argues that the Viswanathan and Pallmann references relate to different non-analogous fields, wherein Viswanathan teaches a global file system that is platform-specific, and which cannot be extended to encompass the Internet.

Examiner respectfully disagrees with this argument. Notably, both Viswanathan and Pallmann discuss a client/server network access system that provides network users with remote access to sources and targets on a network. Both assign global unique identifiers to the sources and targets so that a user can access the sources and targets from anywhere in the network (see Viswanathan, col. 9, lines 6-11, allowing "global access to the devices"; Pallmann, col.8, lines 30-67, allowing "access to millions of publicly available FTP servers on the Internet").

Viswanathan is silent regarding the use or adaptation of this system for the Internet, and states, "while the present invention has been described with reference to a few specific embodiments, the description is illustrative of the invention and is not to be construed as limiting the invention. Various modifications may occur to those skilled in the art without departing from the true spirit and scope of the invention..." (col. 18, lines 7-12). The purpose of the system taught by Viswanathan is to provide a global file system that enables a user to view and access all conventional files and devices on the cluster *no matter where the files are hosted* (see col. 1, lines 11-20). Thus, given both the teaching of Pallman (col. 9, lines 8-10), and the admission by Applicant that the Internet provides a worldwide communication system (see Applicant's response filed on August 11, 2003, p. 15, ¶ 2), it would have been obvious to a person having ordinary skill in the art to expand the file access system taught by Viswanathan to include worldwide Internet access, to allow access to files stored on the Internet so that users can access any files or devices on the Internet "*no matter where the files are hosted.*"

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Thus, Viswanathan actually provides motivation for why one would desire to extend the use of the system to the Internet.

Applicant further argues that the device access taught by Viswanathan can only be performed by computers that are part of the cluster using a single file system and operating system operating system kernel, whereas the Internet as taught by Pallman uses a plethora of operating systems and allows communication independently of any particular operating system. Examiner respectfully disagrees with this argument as well. Notably, Applicant admits that "it is well known that computers connected to the Internet utilize a plethora of different operating system and that communication over the Internet is performed largely independently of any particular operating system or file system." See *id.* For this very reason, it would have been obvious to extend the system taught by Viswanathan to the Internet, so that file and device access would not be confined to a single operating system, but could be utilized worldwide, regardless of operating system.

Finally, note that Viswanathan teaches a UNIX-based system wherein "various modifications may occur to those skilled in the art without departing from the true spirit and scope of the invention." It is well known that a number of UNIX-based systems, such as e-mail and newsgroups, have been extended to encompass the more user-friendly Web environment. Thus, for this reason as well, it would have been obvious to adapt the Viswanathan system to encompass the Web-based environment, to provide a more user-friendly environment for the system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is (703) 306-3041. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

For all After Final papers: (703) 746-7238.

For all other correspondences: (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



BE
December 24, 2003